

C₁ Cont. group consisting of Al, B, Ba, Bi, C, Ca, Ce, Cr, Dy, Eu, Ga, Hf, In, K, La, Mn, Nb, Ni, Pb, Pd, Si, Sn, Ta, Ti, V, W, Yb, Zn, and Zr.

Sub. 31. (Amended) A method of recording/erasing/reproducing an optical information, comprising the steps of:

providing an optical information recording medium comprising a substrate and a multilayer film, the multilayer film comprising a recording layer generating a reversible phase-change which can be optically detected according to an irradiation of an energy beam, a barrier layer, and a protective layer;

recording a signal to said recording layer by irradiating said recording layer with a modulated laser beam erasing a signal recorded on said recording layer by irradiating said recording layer with a laser beam having a predetermined power level;

C₂ reproducing a signal recorded on said recording layer by irradiating a laser beam to said recording layer and detecting a light strength of a reflection light or a transmitted light from said recording layer;

wherein said barrier layer is formed between said protective layer and said recording layer and in contact with said protective layer and said recording layer in contact with said protective layer and said recording layer, and includes one of GeN and GeNO and at least one element selected from the group consisting of Al, B, Ba, Bi, C, Ca, Ce, Cr, Dy, Eu, Ga, Hf, In, K, La, Mn, Nb, Ni, Pb, Pd, Si, Sn, Ta, Ti, V, W, Yb, Zn, and Zr.

Sub. 50. (Amended) An optical information recording medium comprising a substrate and a multilayer film, the multilayer film comprising a phase-change recording layer having reversibly changeable optical characteristics and a Ge-containing layer comprising one selected from the group consisting of GeXN and GeXON as a main component,

C₃ wherein X is at least one element selected from the group consisting of elements belonging to Groups IIIa, IVa, Va, VIa, VIIa, VIII, Ib and IIb, and carbon.

52. (Amended) The optical information recording medium according to claim 50, the medium comprising a first Ge-containing layer and a second Ge-containing layer, the first

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Ge-containing layer and the second Ge-containing layer comprising one selected from the group of GeXN and GeXON as a main component,

wherein X is at least one element selected from the group consisting of elements belonging to Groups IIIa, IVa, VIa, VIIa, Ib and IIb and carbon,

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cont. the phase-change recording layer having a first surface on which laser beams are incident in use and a second surface on the other side,

wherein the first Ge-containing layer is in contact with the first surface and the second Ge-containing layer is in contact with the second surface.

✓
Please add new claim 75, as indicated.

C5 75. (New) The optical information recording medium according to claim 1, wherein said barrier layer contains one selected from the group consisting of Ge-Si-N, Ge-Si-N-O, Ge-Sb-N, Ge-Sb-N-O, Ge-Cr-N, Ge-Cr-N-O, Ge-Ti-N and Ge-Ti-N-O.

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